

ABSTRACT OF THE DISCLOSURE

To take advantage of hierarchical cell layers, an inter-layer handoff system determines a cell layer for servicing a wireless unit at least as a function of the duration that the wireless unit is in a cell or set of cells of a cell layer. For example, as a function of the duration that the wireless unit is in the cell or set of cells for a first cell layer, a determination is made as to whether the wireless unit should be serviced by a cell or set of cells of a second cell layer. As such, wireless units moving at higher speeds which will be handed off frequently in a smaller cell layer(s) are serviced by a larger cell layer(s). Thus, the hierarchical cellular communications system can have the increased capacity provided by the smaller cell layer(s) while reducing the number of handoffs which would occur of the faster moving wireless units in the smaller cell layer(s). In certain embodiments, a timer starts when the wireless unit connects to a cell in a first layer, and the timer stops when the wireless unit disconnects from the cell. Depending on the amount of time that the wireless unit is in the cell of the first layer or a function thereof, the inter-layer handoff system determines whether the wireless unit should be serviced by another cell layer. For example, the network can compare a timer value(s) or a function thereof with threshold value(s) which are chosen such that the frequency of handoffs are below a certain level at each cell layer.